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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
BEX, PATRICIA K

ART UNIT	PAPER NUMBER
1743	12

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Please find below and/or attached an Office communication concerning this application or proceeding.

MF12

Office Action Summary	Application No.	Applicant(s)	
	09/496,408	SHIN ET AL.	
	Examiner	Art Unit	
	P. Kathryn Bex	1743	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 March 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8,10-28 and 32-40* is/are pending in the application.

4a) Of the above claim(s) *32-39* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8 and 10-28, 40* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 9 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

1. The cancellation of claims 9, 29-31 and the addition of claim 40 is acknowledged and has been entered into the record.

2. Applicant's request for reconsideration of the restriction requirement of the last Office Action is persuasive, see Interview Summary Paper nos. 10 &11. Therefore, the last Office Action, Paper no. 8, is withdrawn and a new Office Action appears below.

Election/Restrictions

3. Claims 19-28 are directed to a heating apparatus, previously withdrawn from consideration as a result of a restriction requirement, is now subject to being rejoined. Claims 19-28 are hereby rejoined and fully examined for patentability. However, claims 32-38 drawn to a method and claim 39 drawn to an urging mechanism, not directed to the apparatus of claims 1-28, and will not be rejoined. See record set forth in the previous restriction requirement, Paper no. 6.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1-8, 10-28 and 40 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. In claims 1-8, 10-28 and 40 a "heating means" is critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. Similarly, in claims 27-28, a "a heated cover actuating means" is critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure

See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). The preamble of claims 1 and 19 recite a heating apparatus for biological samples, however no heating means is included within the body of the claim.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-8, 10-28 and 40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-8, 10-28 and 40 are incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: a heating means. Similarly, claims 27-28 are missing a "heated cover actuation means", see page 31, 2nd full paragraph.

Claim 27, line 2, the conditional phase "may be" is not a positive recitation, therefore, renders the claim indefinite

Same line, "the heated cover" lacks antecedent basis. Same deficiency was found in claim 28.

Claims 19 and 40, the recite the term "sufficient". The recitation that an element is "sufficient" to perform a given function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

8. The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

9. Claims 1-2, 11-12, 19-20, 24-25 and 40 are rejected under 35 U.S.C. 102(b) as being anticipated by Aysta *et al* (USP 5,464,541).

Aysta *et al* teach a device and method for separating liquid samples. The apparatus comprising a sample block 44, 50 having a plurality of recesses 32 for receiving sample wells of a sample well tray 54, 58. Aysta *et al* teach the use of a least one urging mechanism 46 interposed between the sample block and the sample well tray and which will impart an urging force on the sample tray when the cover 64 is removed. Moreover, Aysta *et al* teach a modular sample well tray holder 52 for holding the sample well tray (column 8, lines 28- 54, Fig. 5). Note: the process limitations describing wherein the urging mechanism urges the sample wells away from the opening in the sample block upon removal of a pressing force imparted on the top of the sample well tray has not been given patentable weight. Process limitations are not

accorded patentable weight in a claim which is drawn to an apparatus. Moreover, no means for providing a pressing force to the top of the sample well tray is disclosed within the claim.

With respect to the newly claimed wherein clause in claim 40, the prior art device would have been fully capable of performing the same function. No structural limitations are disclosed and therefore the claim has not been accorded patentable weight.

10. Claims 1-8, 11-15, 19-28 and 40 are rejected under 35 U.S.C. 102(b) as being anticipated by Root *et al* (USP 4,948,564).

Root *et al* teach a multi-well filter plate and assemblies. The apparatus comprising a multi-well plate 18 and multi-well plate holder 201 for holding the multi-well plate. Additionally, the apparatus includes a sample block 76 having a plurality of recesses 78 for receiving sample wells of multi-well plate. Root *et al* teach the use of a plurality of springs 204 distributed over the outer periphery of the sample block surface. The springs are interposed between the sample block and the multi-well plate and inherently function to lift the multi-well plate upon removal of the cover 202 (column 7, line 59-column 8, line 65, Figs.14-15). Note: the process limitations in claim 1 and 40 are not accorded patentable weight in a claim which is drawn to an apparatus for the reasons previously discussed above. With respect to the wherein clauses of claims 27 and 28, the device of Root *et al* would be fully capable of performing the same function, see Fig. 14. Specifically, the sample well tray holder 201 may be pressed downward by the cover 202, i.e. when a cover actuating means presses the cover. This would impart a downward force, via the upper set of springs 204, to the sample well tray holder 201 so that the sample well tray 18 could become disengaged from the sample well tray holder

11. Claims 1-8, 10-15, 19-26 and 40 are rejected under 35 U.S.C. 102(e) as being anticipated by Schneebeli *et al* (USP 6,197,572).

Schneebeli *et al* teach a thermal cycler having an automatically positionable lid. The apparatus comprising a sample well tray 11 and sample well tray holder 66 for holding the sample well tray. Additionally, the apparatus includes a sample block 71 having a plurality of recesses 72 for receiving sample wells of sample well tray (Fig. 3). Schneebeli *et al* teach the use of a plurality of springs (no reference number) distributed over the outer periphery of the sample block surface (Figs. 2, 8). The springs are interposed between the sample block and the sample well tray and inherently function to lift the multi-well plate upon removal of the cover 14 (column 3, line 55-column 5, line 16, Figs.1-2, 8-10). Note: the process limitations in claim 1 and 40 are not accorded patentable weight in a claim which is drawn to an apparatus for the reasons previously discussed above.

12. Claims 1-3, 11-12, 19-21 and 40 are rejected under 35 U.S.C. 102(a) as being anticipated by Elsener *et al* (EP 1 088 590).

Elsener *et al* teach a thermocycler apparatus comprising: a cover 14, a microtiter plate 13. Additionally, the apparatus includes a sample block 3 having a plurality of recesses 4 for receiving sample wells of microtiter plate. Elsener *et al* teach the use of a plurality of compression spring lifters 7 distributed over the sample block surface. The springs are interposed between the sample block and the microtiter plate and lift the microtiter plate upon raising of the cover 14 (abstract, Figs. 1-4b). Note: the process limitations in claim 1 and 40 are not accorded patentable weight in a claim which is drawn to an apparatus for the reasons previously discussed above.

13. Claims 1-2, 19-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Moser *et al* (USP 5,616,301).

Moser *et al* teach a thermal cycler apparatus. The apparatus includes a cover 28, a sample block 33 having a plurality of recesses 27 for receiving sample wells of a sample well tray 23. Moser *et al* teach the use of a least one urging mechanism 53 which is configured to impart an urging force on the sample tray when the heated cover 28 is opened beyond a certain angle. The urging mechanism is interposed between the sample block and the sample well tray and provided to facilitate removal of the sample wells from the sample block (column 5, line 35-column 6, line 11, Figs. 3-5). Note: the process limitations in claim 1 and 40 are not accorded patentable weight in a claim which is drawn to an apparatus for the reasons previously discussed above.

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

15. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

16. Claims 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Root *et al* (USP 4,948,564) or Schneebeli *et al* (USP 6,197,572) in view of Schembri (USP 6,162,400).

Root *et al* and Schneebeli *et al* as previously discussed above, do teach the use of a coil spring. However, both are silent regarding the specific use of a leaf spring or the number of spring devices used. However, Schembri teaches the equivalence of a coil or leaf spring (column 5, lines 53-56).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to have substituted the coil spring of Root *et al* or Schneebeli *et al* with a leaf spring since they are art recognized equivalents.

Regarding the specific number of spring devices, it would have been obvious to include four spring devices in the apparatus of either Root *et al* or Schneebeli *et al* since it has been held that the mere duplication of parts has no patentable significance unless a new and unexpected is produced. *In re Harza, 124 PQ 378 (CCPA 1960).*

Moreover, Root *et al* and Schneebeli *et al* disclose the claimed invention except for the specific volume of the sample wells in the sample well tray. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the sample wells of Root *et al* or Schneebeli *et al* within the range of 10 to 500 microliters, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Conclusion

17. No claims allowed.

18. The prior art made of record and not relied upon which are considered pertinent to applicant's disclose are Moring *et al* and Heimberg *et al*. Moring *et al* and Heimberg *et al* are cited of interest in that they show a multi-well filtration device comprising an urging mechanism.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to P. Kathryn Bex whose telephone number is (703) 306-5697. The examiner can normally be reached on Mondays-Thursdays, alternate Fridays from 6:00 am to 3:30 pm EST. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 308-4037.

The fax number for the organization where this application or proceeding is assigned is (703) 305-7718 or (703) 872-9310 for official papers prior to mailing of a Final Office Action. For after-Final Office Actions use (703) 872-9311. For unofficial or draft papers use fax number (703) 305-7719. Please label all faxes as official or unofficial. The above fax numbers will allow the paper to be forwarded to the examiner in a timely manner.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0661.

Kathryn Bex
P. Kathryn Bex
Patent Examiner
AU 1743
April 2, 2002

JEFFREY SNAY
PRIMARY EXAMINER